

LISTING OF THE CLAIMS

 X This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS:

1. (Original) A seal assembly for sealing an annular space between an inner and an outer pipe in a double- walled subsea pipeline which seal assembly:
 - (a) under normal operating conditions is in a non-sealing position which allows the passage of a gas through said seal assembly; and
 - (b) is actuatable from a non-sealing position to a sealing position in response to the entry of liquid into said annular space.
2. (Original) A seal assembly according to claim 1 which
 - (a) in its non-sealing position provides an opening in the annular space to allow the passage of a gas through the seal assembly; and
 - (b) comprises an annular member and moveable blocking means such that entry of liquid into said annular space causes movement of said blocking means to close said opening.
3. (Original) A seal assembly according to claim 2 wherein the blocking means is moveable under pressure of liquid flow.
4. (Original) A seal assembly according to claim 2 which comprises a liquid-sensitive material and wherein the blocking means is moveable as a result of interaction of the liquid with said liquid-sensitive material.
5. (Original) A seal assembly according to claim 3 wherein
 - (a) the annular member comprises one or more orifices ; and
 - (b) the moveable blocking means comprises a diaphragm and a closure member such

that flow of liquid in said annular space causes movement of the diaphragm which causes movement of the closure member to close said one or more orifices.

6. (Original) A seal assembly according to claim 5 wherein the diaphragm and closure member are both annular in shape.
7. (Currently Amended) A seal assembly according to ~~any one of claims 2 to 4~~ claim 2 wherein:
 - (a) the annular member comprises one or more valves; and
 - (b) said valves each comprising one or more orifices and said moveable blocking means such that flow of liquid in said annular space causes movement of the moveable blocking means to close said one or more orifices.
8. (Original) A seal assembly according to claim 7 wherein a valve comprises a blocking plate with an orifice and the moveable blocking means comprises a diaphragm and a closure member which closure member has apertures such that flow of liquid in the annular space causes movement of the diaphragm which causes movement of the closure member against the blocking plate closing the orifice in the blocking plate and the apertures in the closure member.
9. (Original) A seal assembly according to claim 7 wherein the moveable blocking means comprises biased means attached to a closure member which biased means is held in a biased position by means of a liquid-sensitive material such that flow of liquid in said annular space causes interaction of said liquid with said liquid-sensitive material causing said liquid-sensitive material to release the biased means so that said biased means effects movement of the closure member to close said one or more orifices.
10. (Original) A seal assembly according to claim 9 wherein the biased means is a spring.
11. (Currently Amended) A seal assembly according to claim 9 ~~or 10~~ wherein the liquid-sensitive material is a water-soluble salt.

12. (Currently Amended) A seal assembly according to ~~any one of claims 7 to 12~~ claim 7 wherein the annular member comprises one or more tubes in which tubes the one or more valves are situated.
13. (Currently Amended) A seal assembly according to ~~any one of the preceding claims~~ claim 2 wherein the annular member is dimensioned so that it will extend from the inner wall of the outer pipe to the outer wall of the inner pipe and will be in sealing contact with each of said inner and said outer walls.
14. (Currently Amended) A seal assembly according to ~~any one of claims 1 to 3~~ claim 2 wherein
- (a) the annular member is dimensioned so that it will be sealing contact with only one of the inner wall of the outer pipe and the outer wall of the inner pipe and will provide an opening in said annular space between the annular member and the wall with which it is not in sealing contact; and
 - (b) the moveable blocking means comprises resilient means which is deformable under the pressure of liquid flow in the annular space to close said opening.
15. (Original) A seal assembly according to claim 14 wherein the annular member has a longitudinal end face which has a recess to define upper and lower arms and one of these arms is the resilient means deformable under the pressure of liquid flow in the annular space to close said opening.
16. (Currently Amended) A seal assembly according to ~~claim 13 or claim 14~~ claim 15 which comprises annular restraining means bonded to the upper and lower arms of the annular member.
17. (Currently Amended) A pipe system comprising an inner and an outer pipe and a seal assembly according to ~~any one of the preceding claims~~ claim 1.
18. (Currently Amended) A valve suitable for use in the seal assembly of ~~any one of claims 7 to~~